A MONASTERID STARFISH FROM THE PERMIAN OF TIMOR. *Memoirs of the Queensland Museum 43(1): 340. 1999:–* Among a large collection of Permian fossils made by Brad Macurda from the Indonesian island of Timor and deposited in the Museum of Paleontology at the University of Michigan is a fragment (2 arms) of a small starfish, the first record of the group from that island which has yielded the world's most diverse Permian echinoderm fauna. The locality label reads 'No. 51702, 1 specimen, Permian, Tonino 1, Timor'. This locality refers almost certainly to the known Permian locality Tonino (=Toeninoe of Macurda, 1983) Noil (=stream) 1-2km SE of Basleo, SE Timor.

Order PUSTULOSIDA Spencer, 1931

Suborder MONOMARGINALINA Kesling, 1969

Family MONASTERIDAE Schuchert, 1915

Genus nov.

(Fig. 1)

DESCRIPTION. Arms 8mm long, 4mm wide proximally and 2mm deep, upturned strongly at distal tip. Dorsally all plates strongly convex to bulbous: median column of radials or carinals of 4 plates, with distal one greatly inflated and terminating arm; inferomarginal columns enclosing arms laterally and visible in both dorsal and ventral views, each column of 3 convex plates; with 3 interradial plates not inflated, with small axil visible dorsally and ventrally. Ventral surface mainly 2 columns of large adambulacrals; adambulacrals short and wide, becoming narrower distally, transversely convex, in contact along axis so concealing ambulacrals. Mouth frame disarticulated, unclear.

REMARKS. Following Kesling's (1969) review, this specimen fits the concept of the Monasteridae because it has short wide adambulacrals ventrally and dorsally the column of strong dorsal carinals contiguous with the inferomarginals that enclose the arms laterally. The family is known from Australia (Kesling, 1969) and South West Africa (Lane & Frakes, 1970) but all known Australian species are represented by specimens very much larger (at least 5 times) than this Timorese specimen so its morphology is probably that of a juvenile. It is, therefore, difficult to make meaningful comparisons with confidence and makes any formal taxonomic decisions inadvisable. The most distinctive feature of the new specimen is the extremely large terminal radial plate which is highly suggestive of a new genus. It is difficult to imagine such a distinctive feature disappearing with growth and none of the known species of the family have such an arm termination. However, with only 2 arms of a juvenile and no disc details available I find myself in the same position as Lane & Frakes (1970), unable to name a new taxon based on it. The occurrence of monasterids in Timor further strengthens the faunal similarities between that island and Western Australia so evident among crinoids and blastoids (Webster & Jell, 1992).

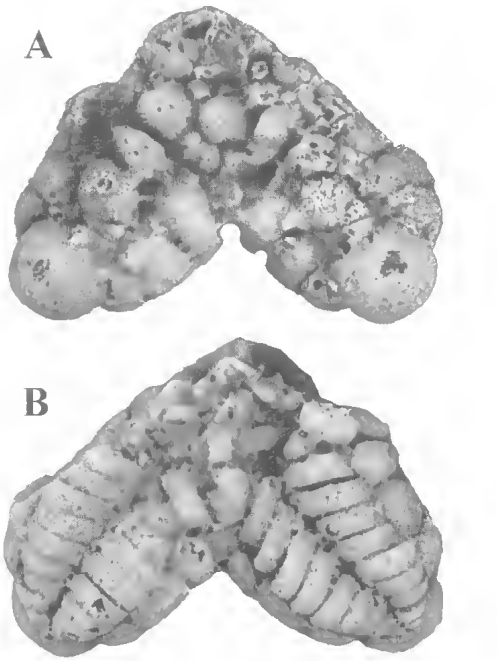

FIG. 1. Monasteridae gen. nov. UMMP51702, ×7.5. A, dorsal view. B, ventral view.

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